

SECRET

NOT RELEASABLE TO FOREIGN NATIONALS**PLASTICS AND SYNTHETIC FIBERS IN POLAND****ORGANIZATIONAL COMPOSITION OF PRODUCTION, CONTROL OF SALES AND
IMPORTS AND EXPORTS OF PLASTICS AND SYNTHETIC FIBERS IN POLAND**

The 24th International Trade Fair at POZNAN, which took place between 3 and 24 July 1955, included as participants, several Polish organizations and offices, which also represented the Polish plastics and synthetic fiber industries.

The Polish CIECH Foreign Trade Enterprise of WARSAW, ul. Jaana No 12, was officially responsible for the export of Polish plastics, as well as for the import of semi-finished products for the industry. The responsible official of the CIECH Enterprise was a Mr. JURCZAK of the Chemistry Section.

The import of finished plastic articles appears to be the responsibility of the VARIMEX Foreign Trade Enterprise of WARSAW, Wilcza 50/52.

The CeTeBe national enterprise of LODZ, ul. Narutowicza 13, is responsible for the import and export of all manner of synthetic fibers.

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The central management of the plastics industry (production) is located at the CENTRALNY ZARZAD PRZEMISLU TWORZYW SZTUCZNYCH, Gliwice, ul. ZWYCIESTWA, 21. (Central Office of the Plastics Industry). The Central Office is directed by Engineer KULBINGER.

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The Central Office is the final authority for all intended imports of raw materials and machines for the plastics industry and consequently has the right to issue the necessary directives to the CIECH Enterprise.

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The Katowice [now Stalinogrod] Sales Office for Plastics (or for plastic laminates) is responsible for supplying the Polish internal trade sector. [redacted]

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[redacted] The office was represented at the trade fair by Engineer Zielewski (phonetically). The Katowice Office is also responsible for supplying Polish manufacturers, who process plastics materials into finished products, with plastic laminates.

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^A
~~From the~~ synthetic fiber industry ~~a~~ quality control station in LODZ/Tomassow was represented at the trade fair by a Mr. NENTWICH. [redacted]

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[redacted]

The general director of the synthetic fiber industry is Mr. SOBOLEWSKI, who has had the position he now has for only one year. His technical director is Mr. GILINSKI, [redacted]

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The above general directors are in the position to pass on pertinent directives to their ^{respective foreign} trade offices. They are only responsible to the Warsaw PKPD Ministry [probably PKPG, State Economic Planning Commission].

The METAEXPORT Enterprise of Warsaw, Mokotowska 49, imports and exports machines for the synthetic fiber industry. This enterprise is represented by Engineer WIECEK and B. GRYNBLAT.

PRODUCTION AND SUPPLY SITUATION IN THE PLASTICS INDUSTRY

A. The Exhibited Products

Without exception, the products exhibited at the Trade Fair were, [redacted] of second quality. [redacted] the Polish plastics industry, judging by the products exhibited, is to-day at the same level the German industry was in 1948. The Polish plastics industry was, according to various statements, created only in 1951. Its future development suffers greatly through the lack of qualified personnel and the absence of closer contact with the developments in plastics industries [redacted]

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With reference to Polish trade literature, [redacted]

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[redacted] one brochure on phenolic resins and a three-volume 1953 edition
of a work ^{on} plastic materials and elastomers are available. [redacted]

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KULBIN [redacted]

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Plastv [redacted]

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The products exhibited at the trade fair can be divided into three groups, according to which a clear determination can be made as to where the emphasis in production has been placed:

1. Various types of compositions for molding
2. PVC products
3. Products made of fabric-backed plastics or paper impregnated with plastic resins. Other plastics, such as metacrylic resin sheets ^{and} injection molding compositions, do not seem to have reached any great significance in production, as yet.

In general, the following types of products were exhibited:

Hard PVC parts, such as sheets ^{and} pipes; a pickling plant for galvanizing; rods up to about 30 millimeters in diameter; matrixes; carpet beaters; photo trays, and fan parts; single-color, soft PVC foils which were streaked and their colors were not resistant to light; also single-color soft PVC sheet which showed no special luster, probably due to faulty press plates; fabric-backed PVC guide strips with completely aged scars, ⁹ the PVC layer was at least 1 - 2 millimeters thick. It must be very difficult to process such materials at all. [redacted]

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[redacted] the purchasers of the material insisted on the quality shown, since it would otherwise not be suitable for the interiors of railroad cars; molded parts, such as plates, an obsolete radio housing, a telephone, numerous electrical small parts, household articles; "Resolan" rods and sheets; metacrylate resin plates; "Mika" sheets (the "Mika" is imported from China);

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melamine resin, under the trade names of "Melaform PM-80" and "Melaform

was also shown.
 WM-100." Plates made of these materials made a poor impression. The material was not clean and the finished products did not have a smooth surface. [redacted] melamine resins were still very costly.

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Brake shoes are scheduled for production from "asbestos-phenolit"

[redacted] 25X1

Much space was devoted to products which [redacted] go under the name of "Dytron" hard fiber sheets, "Trolitax" hard paper sheets, and "Lignofol" pressed plywoods. [redacted] of all the plastics displayed at the trade fair, these products were the best produced

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[redacted] the Poles were able to fall back upon [redacted] production facilities in factories built during the war.

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The products shown ^{well} ~~are~~ clamping plates, partially also in "Sandwich" design; complete barrels; [composition] gears and complete sliding linkages (Schlitten), naturally made up of individual parts; large and small rings (about 150 millimeters in diameter); shuttles, and various racks (Gestelle),

These articles are distributed by PAGED. [redacted]

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[redacted] under the jurisdiction of KULBINGER, [redacted]

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The above articles are known under the name of "Textolit" and were not located in the chemistry display but in the Wood and Metals Building. In general, they are products similar to "Textolit".

"Textolit" is manufactured in Gliwice. A particular shortage ⁱⁿ ~~for~~ the production of this commodity exists in the pigments, which have to withstand temperatures of up to 160 degrees during pressing. Such "Textolit" products as wheels, plates, bearing linings for rolling mills, etc., were exhibited. ^{Am} ~~It has been attempted~~ ^{was made} to provide holes for the bearing linings, in order to render them self-lubricating, but this problem has not yet been solved.

Air pumps, made of ^{paper} ~~impregnated~~ with phenol resin, were also shown. These products are manufactured in large quantities and are being exported.

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"Textolit" miner's helmets were shown, which sell in Poland for 50 zloty. Since the domestic market for these helmets has already been saturated, it is desired to export them. Their quality appears to be quite good. The interior fittings however (the protective leather bands) does not correspond to [] standards.

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Combs and ball-point pens made of polyamide were also shown. In addition, a WARSAW factory is manufacturing bearing ^{liners} ~~cases~~ of polyamide, a material which is obtained as a waste product in the manufacture of synthetic fibers.

An exhibit of 2-meter long, 250-millimeter diameter pipes, which appear to be made of paper strips coated with phenolic resin, made a very good impression. [] a very impressive type of article, whose real value however, would have to be judged by a ^mexpert in this field.

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B. The Plastics Raw Material Situation**1. P.V.C.**

A semi-technical PVC plant is in operation. The material it produces is not yet without fault, since it shows great differences in the degree of polymerization. Consequently, Poland imports considerably quantities of grades "R" and "P" PVC from SCHKOPPAU.

The demand for hard PVC sheets cannot be covered. [] due to the shortage of pressing sheets (Pressbleche) for the required thicknesses. It is anticipated that, in the very near future, some perfect PVC raw material will be produced and the demands made by Mr KULBINGER were likewise directed primarily at the procurement of equipment for the preliminary processing of PVC items.

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The utilization of hard PVC for corrosion protection, or in the chemical industry, appears to be in its infancy, since the people here are very conservative. Hence, no great use is made of extruded hard PVC pipes with a diameter of approximately 100 millimeters.

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Soft PVC sheet material with moderate luster constitutes a new product.

Most probably, vacuum-molded hard PVC parts have already been manufactured.

However, there was no trace of thin hard PVC sheets being used for packaging purposes anywhere.

2. Polyethylene

A polyethylene factory, with a capacity of 10,000 tons per year will be established. Mr. KULBINGER had a personal interest in this matter. [redacted] 25X1
[redacted] the production of polyethylene was not 25X1
being planned until 1960. Currently, Poland neither produces nor processes polyethylene.

3. Methacrylic resins

Methacrylic resins are being manufactured in limited quantities in Poland and are processed into sheets. [redacted] 25X1
[redacted] The product appears to be put 25X1
to exclusive military use. [redacted] cabin and cockpit bubbles 25X1
for gliders. The material was of Polish manufacture and showed definite distortions. [redacted] first quality sheets of Polish manufacture, 25X1
displayed at a stand at the trade fair.

4. Polystyrene

Polystyrene is manufactured in Poland in small quantities. The production of this item is scheduled for expansion during the next 2 years.

5. Phenolic, Urea, and Melamine resins

It is hoped that the above commodities will be available for export in small quantities next year. Experiments with the production of laminated two- and three-layer sheets, manufactured from urea plastics, are in progress. These sheets are supposed to be suitable for engraving (somewhat similar to the "Astralon" process.) One ton of phenolic resin, depending on quality, costs 10 - 38,000 zloty in Poland. This information is not reliable.

6. "Palatol" plasticizer

In the near future, sufficient quantities of the above items will be available to satisfy domestic demand.

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 Tricresylphosphate is being produced in limited quantities.

Dibutylphthalate and dioctylphthalate are imported [redacted] 25X1

[redacted] from the Huels Chemical Works. [redacted] 25X1

dibutylphthalate is either already being produced in Poland or is scheduled for production shortly. 25X1

7. Polyvinyl alcohol and polyvinyl acetate production is not being planned until 1960.

8. Hexamethylenetetramine is being produced by the DZIERZYNSKI Works in TARNOW.

9. Orthotoluidine and aniline salt are being produced in ZAROWJEW.

10. "Textolit" pressings and impregnated fabric strips are being produced in GLIWICE. It is believed that, should sufficient polished pressing sheets be available, production could be increased by 400 tons of "Textolit" sheets [terms of reference not given.].

11. "Resolan"

"Resolan" is being offered in sheets or rods. The exhibit at the fair contained "Resolan" table tops, most of them 2 centimeters thick. [redacted] 25X1

[redacted] 25X1

12. Polyester resins

These items are being manufactured in Poland. Processing of fiber-glass materials has not yet been planned. There is primarily a shortage of fiber - glass. Polyester resins production ^{is} so much in its infancy that no-one even entertains the thought of importing fiber-glass or even the equipment required for the production of the resins.

[redacted] 25X1

[redacted] Russian fishermen are trading fiber-glass buoys to their 25X1

[redacted] counterparts for other necessities. This would tend to confirm 25X1

once more that not all which is produced in these countries is always displayed.

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13. Dye stuffs

Dyestuff containers carried the inscription "BORUTO SGIERZ" (Chrome and nigrin dyestuffs).

The Poles believe that they have made good progress in the lacquer field (NOVOLAKY). [REDACTED]

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[REDACTED]

In GRODZISK, acetone and sodatypes [sic], as well as methyl chloride are being produced.

THE SITUATION IN THE FIELD OF PLASTICS MACHINES

Hydraulic Presses

Hydraulic presses are being imported from Czechoslovakia and, more recently, also being produced in POZNAN. Such presses bear a manufacturer's plate with the inscription "GLIWICE" and the model number "P-100." The machines have an operating pressure of 100 tons and the table measures 650 x 650 centimeters. The maximum distance between table and punch is 700 millimeters. The presses exert pressures ranging from 25 - 200 atmospheres.

With a listed pressure of about 150 kilograms per square centimeter, small melamine resin parts were being pressed on the exhibited press and distributed to the public.

The outside dimensions of the exhibited press are very large; the press is more than 2 meters tall and 1.5 meters wide. The press is a prototype, of which 20 pieces are to be manufactured this year and possibly 30 next year. In their correct perspective, these claims appear to be somewhat questionable but were actually made to me.

Injection molding machines

Such machines, and particularly a "30-g" injection molding machine similar to the ECKERT & ZIEGLER product, are being manufactured in POZNAN. At the fair, polystyrene egg spoons were being cast in a double mold for demonstration purposes.

Patterns for injection molds and presses are manufactured in a factory in POZNAN.

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The various tools [redacted] did not make a favorable impression, 25X1
 they were not clean-cut. Similar tools are also being manufactured by the individual plastics fabricating plants. Frequently, equipment and tools are designed to take up too much material; they are deliberately oversized, so that the factory can use as much plastic material as possible in their production and thus be able to comply with the plan figures calling for relatively high plastic material consumption.

[redacted] powdered material for pressing was frequently passed 25X1
 right into the presses, without pre-heating or tablet forming, since the necessary machinery was not always available. Similar procedures have also been adopted with PVC sheets, in that plastic materials were spread between the press plates. [redacted] 25X1

[redacted] 25X1

The "P-100" press is manufactured by the STALIN Works in POZNAN.

One or more heavy duty presses for hard PVC pipes, ~~of~~ approximately 100 millimeters and 2 meters long, are also on hand.

A large phosphate fertilizer plant, which was established during the war by ROMAN MAYER, is located in POZNAN. [redacted] the 25X1
 plant has been expanded by the addition of at least one, but possibly more, large shops.

POLISH REQUIREMENTS IN THE PLASTICS INDUSTRY

A. Unofficial

There is a great shortage of specialists, press sheets, and dyestuffs.

B. Official:

Tablet presses for plastics; HF preheating instruments for plastics; PVC foil drawing calenders; PVC kneading and mixing machines (like the BUSS or the BANBURY); Snail injection machines (150 millimeter diameter) for the production of hard PVC pipes; four-color printing machines for PVC foils; vacuum-molding machines; automatic injection molding machines with more than "60-g" injection pressure (Schussgewicht); HF welding machines for processing soft PVC products (probably already delivered by KORTING); DOP plasticizers

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(definitely already delivered by HUELS); PVC slide fasteners; PVC-covered fabrics; PVC foils; PVC flooring; granulated polyethylene; tube-form polyethylene foils for the production of bags; WIP welding machines for welding polyethylene foils; a printing press for printing table cloths in one operation; rentals of press and injection molding patterns and molds (much interest in this matter); asbestos-filled plastics for flooring or brake linings [redacted] for brake linings); finished costume jewelry, household articles, toys, and other items of injection-molded plastics; ^{and} "Styroflex" foil (already being delivered by the NORDDEUTSCHE SEEKABEL Works).

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It is not very difficult to recognize which ones of the above requirements are genuine and where it is a matter of simply gathering competition materials [bids] in an effort to straighten out Polish production.

PRODUCTION AND SUPPLY SITUATION IN THE SYNTHETIC FIBER FIELD

In the same exhibition hall, various textiles and textile products were also shown. They were suitings with casein fiber admixtures; draperies with "Perlon" admixtures; various yarns and large drums of unspun fibers based on casein and cellulose staple fibers. [redacted]

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1. TOMASZOW

Cellulose staple fiber and cellophane are manufactured in TOMASZOW but are not of weather-proof quality. [redacted] production-wise, ^{25X1} weather-proof fabrics could be produced in Poland without difficulty, but such production is not being undertaken because of a certain amount of passive resistance among leading workers. The people are simply not inclined to work harder, because of the extraordinarily low standard of living.

The cellophane foil is called "Folia Tomaszowa." [redacted]

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[redacted] this product was considerably "wavy" (wellig).

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2. JELANIA GORA

The Poles have built a cellulose staple fiber plant in Jelenia Gora .
 Plant equipment for this installation was, also imported from Czechoslovakia.

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[redacted]
 [redacted] This price was too high for the Poles.

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They attempted to build the factory themselves. They used [redacted] plans,
 at least those which they possessed at the time [redacted]

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[redacted] The plant was accordingly built and, after it was in operation,
 some very poor results were evident. Consequently, the WARSAW ministry is
 now inclined not to place similar orders for the construction of industrial
 installations with Polish construction enterprises, but to permit the
 factories to be built by foreign firms. [redacted] the
 fiasco regarding Jelenia Gora ^{did not come to a head} ~~was not~~ until 2 weeks ago.

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The Germans delivered an installation for the production of "Perlon"
 Currently, Jelenia Gora produces about 2,000 kilograms of single-strand
 "Perlon" per month. The product is used for fishing lines and woven purses.
 The waste is used in the production of brushes.

The manufacture of "Perlon" at Jelenia Gora is supposed to be halted and
 transferred to GOROWO ILAWECKIE.

3. GOROWO ILAWECKIE

The rayon factory in GOROWO ILAWECKIE was completely dismantled by the
 Russians and even the power cables were ripped from the ground. With the aid
 of the eastern zone [GDR?] the plant was rebuilt. The Poles want to increase
 the production of "Perlon" at the plant and, possibly, intend to introduce
 the production of acetate fibers, which are not being produced anywhere in
 Poland as yet. The "Perlon" fibers produced at GOROWO ILAWECKIE are called
 "Polan;" those produced at Jelenia Gora are called "Steelon."

[redacted] the trade mark designations appear
 somewhat unclear. [redacted] "Perlon" ladies' hose bearing the trade mark

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"Polfa," and produced by a factory in STARGARD. The price of the hose was
 60 zloty, [redacted]

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The production of acetate fibers, according to Mr. NENTWICH, is currently not yet an actuality and probably will not be started until 1965.

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[redacted] ^{entire} the domestic demand for "Perlon" in Poland is being covered ^{from} Polish production. This opinion may be correct, since the Poles are not familiar with the concept of "stimulating-demand" (Bedarfsweckung).

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4. MALKINIA - LYCH [sic]

The Poles have planned a new cellulose staple fiber plant or a cellulose plant in MALKINIA or in its immediate vicinity [redacted] this will be a cellulose staple fiber plant.)

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[redacted] there is a tendency to locate industrial plants in eastern Poland.

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5. STARGARD

It is possible that it is planned to erect a "Perlon" processing plant in STARGARD, since the town already has a number of hosiery mills which produce ladies' hose under the trade name of "Polfa." Information on this topic was not clear.

"Perlon" hose production is centered mainly on the manufacture of 40 denier hose. The Polish mills operate on the three-shift system.

6. LODZ

Casein fibers are manufactured in LODZ, [redacted]

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[redacted] The fibers are added to woolens used in the production of clothing and have proven very satisfactory, provided the mixture does not exceed 25 percent casein fibers. Frequently, however, the ratio is increased to as much as 40 percent. The fibers are reportedly very springy and are marketed under the name "Vipolan." The above information originated with Mr. NENTWICH. The above plant is reportedly the only casein fiber plant [in Europe?] other than corresponding plants [redacted]

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LODZ is also a center for the manufacture of "LFMJ" yarn-stretching equipment, (Strecksvirnanlagen), winding machines, etc. [redacted]

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[redacted] these machines were not good, since it was very difficult for Polish enterprises to obtain replacement parts. [redacted] the metal used in these machines was as "soft as butter."

Cellulose fiber yarn is also manufactured in LODZ.

MISCELLANEOUS

"Perlon" hose is mostly manufactured in 40 denier.

Cellulose staple fiber is mostly manufactured in 300 denier.

One of the exhibition halls [at the trade fair] was covered with corrugated "Eternit" sheets. [redacted]

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The Russian pavillion contained an exhibit of phenol plastic bearing linings, which reaked excessively of phenol. An exhibit of pink polystyrene blocks, marked "I - 8" was also shown, as were small "Plexiglass" tank trucks for advertisement, toys, etc., somewhat like our quality was in 1949. [redacted]

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Synthetic waxes are manufactured at KEDZIERZYN.

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The Poles seem to have good business connections [redacted] in the field of building and equipping cellulose staple fiber plants in Poland.

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Poland has ^{the following} (Cotton (?) machines; ~~as follows~~ two 61-gauge; three to four 59-gauge; six to seven 50 plus-gauge; all the rest are 48 or 46-gauge.

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Finished products are exported in quantity [redacted] This probably means primarily fabrics.

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Poland also manufactures 15-denier "Perlon" fibers.

The Poles have purchased 20 "Dobson" or "Thopson" machines.

There is a shortage of cotton linters. Cellulose linters, which are being used in their place, result in a yellowish color.

[redacted] experiments with new synthetic fibers are constantly being conducted. [redacted] possible [redacted]

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[redacted] "Orlon." [redacted]

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[redacted] the Polish

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"Metalexport" Foreign Trade Enterprise wishes to cooperate with a [redacted] enterprise which can deliver "Perlon" spinning equipment to complement the activities of the Polish winding-machine production industry.

[redacted] the Poles actually do produce ~~ap~~rolactam. Should this commodity be imported from another country, [redacted] the

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HUELS Chemical Works is involved in the deliveries.

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